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| 10/716,782 | 11/18/2003 | Scott D. Cohen | 07844-625001 / P578 | 6167 |

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| EXAMINER |
|---|
| ALLISON, ANDRAE S |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
| **Office Action Summary** | 10/716,782 | COHEN ET AL. |
| | Examiner | Art Unit | |
| | Andrae S. Allison | 2624 | |

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)☒ Responsive to communication(s) filed on <u>20 April 2007</u>.

2a)☒ This action is **FINAL**.        2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)☒ Claim(s) <u>1-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-33</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 February 2007</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

## DETAILED ACTION

### *Response to Remarks*

1.      The Office Action has been issued in response to amendment filed April 17,

2007. Claims 1-33 are pending. Applicant's arguments have been carefully and

respectfully considered in light of the instant amendment, and are not persuasive.

Accordingly, this action has been made FINAL.

### *Claim Objection*

Claims 18-19, 22 and 25-27 have been amended to over the claim objection.

Therefore the objection has been removed.

### *112 Rejections*

Claims 4, 7, 12, 15-16 and 18-32 have been amended to overcome the 112

indefinite rejections.  Therefore, the rejection has been removed.

### *Response to Rejection Arguments*

In response to applicant's argument, on page 9 [p][005] and page 10 [p][001] that

the references fail to show certain features of applicant's invention, it is noted that the

features upon which applicant relies (i.e., the technique for edge detection) are not

recited in the rejected claims.  Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument on page 9 [p][005] and page 10 [p][001-004] that the Takahaski fail to disclose the calculating the gradient value for edge pixels, the Examiner disagrees. Takashi clearly teaches where calculating the gradient value for edge pixels (detect the color change between objects, column 12, lines 61-63). By definition, calculating a gradient is determining a rate of change (see Wiley Computer Vision and Image Processing; also see spec page 5, lines 25-30).

On page 10, [p][005], Applicant argues that Prakash failed to disclose identifying a plurality of edge pixels in the image based on a respective gradient value associated with each of the plurality of edge pixels, an argument to which the Examiner agrees. However, note that the limitation recited above was not recited in claim 9, instead claim 9 recites "the method of claim 1 further comprising splitting a component into two components". The Takashi reference did not mention the limitation of claim 9, so the Examiner introduced the Prakash reference to cure the deficiencies of Takashi. Therefore Applicant's arguments are moot.

In response to Applicant's argument on page 11,[p][001-005], note the discussion above.

In response to Applicant's argument on page 12, [p][001-005] that the references fail to show certain features of Applicant's invention, it is noted that the features upon which Applicant relies (i.e. prior to cropping) are not recited in the rejected claims.

Although the claims are interpreted in light of the specification, are not read into the

claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant further argued on page 12, [p][006] and page 13, [p][001] that the

Examiner did not provide the grounds for drawing the conclusion that it would have

been obvious to adjust one or more of the defined cropping areas includes splitting a

single cropping area into two or more cropping areas, the Examiner disagrees. The

Examiner clearly stated the reasons for splitting a single cropping area into two or more

cropping areas is that if two cropped area are identified as one, the area would be split

into two or more before completing the crop operation, furthermore, performing such

operation is will known in the art.


## Drawings

2.      The drawings are objected to under 37 CFR 1.83(a). The drawings must show

every feature of the invention specified in the claims. Therefore, the limitation "two or

more non-overlapping embedded images" must be shown or the feature(s) canceled

from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

3.      The amendment filed April 17, 2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure.  35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention.  The added material which is not supported by the original disclosure is as follows:  Claims 1, 17 and 33 recite the limitation "two or more non-overlapping embedded images", however this limitation was not disclosed in the specification, and is an essential element in the claims.

        Applicant is required to cancel the new matter in the reply to this Office Action.

## Claim Rejections - 35 USC § 112

4.      The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.      Claims 1-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.  The claim(s) contains subject matter was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.  Claims 1, 17 and 33 recite the limitation "two or more non-overlapping embedded images", however this limitation was not disclosed in the specification, and is an essential element in the claims.

## Claim Rejections - 35 USC § 102

6.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.      Claims 1, 3-7 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by

Takahashi (US Patent No.: 6,665,439).

        As to claim 1, Takahashi discloses a computer-implemented method for

identifying one or more objects within an image (image recognition method; column 1,

lines 11-12) the method comprising: receiving an image that includes two or more non-

overlapping embedded images (e.g. 40 and 41, see Fig 4); identifying a plurality of edge

pixels based on a respective gradient value (detect the color change between two

objects, column 12, lines 61-63) associated with each of the plurality of edge pixels

(edge image, column 12, line 54); selecting an edge pixel from the plurality of edge

pixels (1001, see Fig 11); identifying a plurality of substantially connected edge pixels

being substantially connected to the selected edge pixels (detect the shape of objects in

the image, see column 12, lines 65-67); and identifying a bounding area within the

image, the bounding area surrounding the plurality of substantially connected edge

pixels (e.g. 51, see Fig 4)


        As to claim 3, Takahashi teaches the wherein identifying a plurality of edge pixels

includes computing the respective gradient value for each of a plurality of pixels in the

image (detect the color change between two objects, column 12, lines 61-63).


        As to claim 4 Takahashi teaches the method wherein computing the gradient

value for each of the plurality of pixels includes, for each pixel comparing respective

pixel colors of a neighborhood of pixels surrounding the given pixel (column 30, lines 15-25).

As to claim 5, Takahashi teaches the method wherein computing the respective gradient value for each of the plurality of pixels includes using an image smoothing filter-to-filter noise from the image (column 2, lines 52-56).

As to claim 6, Takahashi teaches the method further comprising passing each component to a processor that extracts the location of the object from the component (column 4, lines 58-59).

As to claim 7, Takahashi teaches the method, further comprising refining the extracted location (column 4, lines 20-54-58).

As to claim 10, Takahashi teaches the method, further comprising merging the bounding are within the image with another bounding area within the image into a single bounding area (column 29, line 63-67).

### Claim Rejections - 35 USC § 103

8.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.      Claims 8, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US Patent No.: 6,665,439) in view of Huang et al (US Patent No.: 5,671,290).

As to claim 8, Takahashi does not disclose expressly the method further comprising using the extracted location to crop the embedded image from the image. Huang discloses a method for identifying people (column 1, lines 23-13) including using the extracted location to crop the embedded image from the image (column 2, lines 57-58). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have added the method for identifying people of Huang to the image recognition method of Takahashi to eliminate unneeded portions not specifically depicted part of the extracted object (column 2, lines 58-60).

As to claim 11, Huang teaches the method further comprising: extracting a location of each of the two or more non-overlapping embedded images from the image; and using the location to seed a crop operation (column 2, lines 57-58).

As to claim 12, Huang teaches the method of wherein using the extracted object location to seed a crop operation includes: for each of the two or more non-overlapping embedded images in the image, using the location to define a cropping area; and cropping all the defined cropping areas in a single cropping operation (column 4, lines 20-24).

As to claim 13, Huang teaches the method wherein: the location specifies an alignment of one of the two or more non-overlapping embedded images with respect to the image; and using the location to define a cropping area includes using the alignment of one of the two or more non-overlapping embedded images to define an alignment of the cropping area (column 9, lines 45 - 60).

10.    Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US Patent No.: 6,665,439) in view of Huang et al (US Patent No.: 5,671,290) further in view of Noda et al (Pub No.: US 2002/0030634).

As to claim 14, neither Takahashi or Huang disclose expressly the method further comprising: prior to cropping all the defined cropping areas, adjusting one or more of the defined cropping areas in response to user input. Noda discloses a method for image synthesis ([p][002], lines 1-2) wherein prior to cropping all the defined cropping areas, adjusting one or more of the defined cropping areas in response to user input ([p][0106], lines 1-3). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combined the image synthesis method of Noda with the image recognition method of Takahashi as modified by Huang so that a user could adjust the location of the boundaries or contours of the identified object(s) so that the object(s) can be cropped properly.

As to claim 16, Curtright does not expressly disclose the method wherein adjusting one or more of the defined cropping areas includes splitting a single cropping area into two or more cropping areas. However, it would have been obvious to split a single cropping area into two or more cropping areas so that if two cropped area are identified as one, the area would be split into two or more before performing the crop operation (OFFICIAL NOTICE).

11.     Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US Patent No.: 6,665,439) in view of Huang et al (US Patent No.: 5,671,290) further in view of Curtright et al (US Patent No.: 5,844,570).

As to claim 15, neither Takahashi or Huang disclose expressly the method further comprising: prior to cropping all the defined cropping areas merging two of the defined cropping areas into a single defined cropping area. Curtright discloses a method for generating digital map that includes merging two cropping areas into a single cropping area (column 6, lines 15-20).   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to added the method for generating digital map of Curtright to the image recognition method of Takahashi as modified by Huang so that if one cropped area is identify as two area objects, the cropped areas are merged into a single area before performing the crop operation.

Note that Curtright does not disclose performing the operation prior to cropping all the defined areas, however, it would have been obvious to crop all the defined areas

so that if one object is erroneously identified as two, the areas would be merged or combined before carrying out the cropping operation (OFFICIAL NOTICE).

12.    Claims 9, 17, 19-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US Patent No.: 6,665,439) in view of Prakash et al (US Patent No.: 6,778,698).

As to claim 9, Takahashi does not expressively disclose the method further comprising splitting the bounding area of the image into a first of the two or more non-overlapping embedded images and a second of the two or more non-overlapping embedded images. Prakash discloses an image segmentation method that includes splitting the bounding area of the image into a first of the two or more non-overlapping embedded images and a second of the two or more non-overlapping embedded images (column 3, lines 37-38). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the image segmentation method of Prakask with the image recognition method of Takahashi to split edge pixels of multiple objects erroneously identified as a single object into multiple objects.

As to claim 17, note the discussion above, this claim differs from claim 1 only in that claim 17 is computer program product whereas, claim 1 is method and the limitations computer-readable medium, instructions and programmable processor are additively recited in the preamble. Prakash teaches a computer program product stored

on computer-readable medium (116, see Fig 2) comprising instructions (program

instructions (see Fig 2) and executed by programmable processor (114, see Fig 2).


As to claim 33, note the discussion above of claims 1 and 17, all the limitations

are discussed except: receiving a scanned image that includes multiple objects;

erasing from the edge pixel map all the edge pixels that belong to the connected

component or that are enclosed by the extracted object; and (6) repeating steps (2)

through (5) until no more edge pixels are found. Takahaski teaches erasing from the

edge pixel map all the edge pixels that belong to the connected component or that are

enclosed by the extracted object (column 29, lines 63-65); and (6) repeating steps (2)

through (5) until no more edge pixels are found. Takahaski does not expressly disclose

receiving a scanned image that includes multiple objects. However it would have been

obvious to have receiving a scanned image that includes multiple objects because

scanning is a well-known technique for digitizing an image so that editing such as

cropping or resized can be performed on the image.


Claims 19-32 differ from claims 3-16 only in that claims 3-16 are method claims

whereas, claims 19-32 are product claims. Thus, claims 19-32 are analyzed as

previously discussed with respect to claims 3-16 above

>

## *Conclusion*

13.    **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

## *Inquires*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andrae S. Allison whose telephone number is (571)

270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00
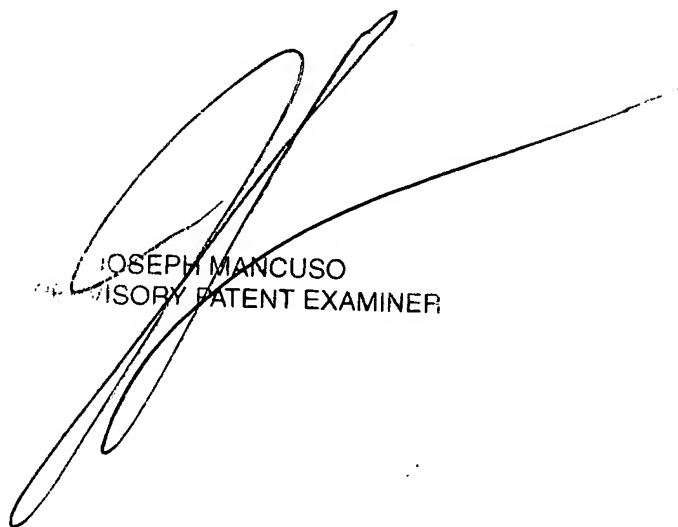
pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrae Allison

June 13, 2007

*A.A.*

JOSEPH MANCUSO
ISORY PATENT EXAMINER